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more than about 10%, more than about 15%, more than about 20%, or more than about 25% or more than the solid body **920**. While described in terms of a machined unitary body, the three-dimensional structure **902** can alternatively be stamped or formed in a number of different ways, including those illustrated in FIGS. **18-21** and described below.

FIG. **18** illustrates a sectional view of a stage of a process for forming a three-dimensional structure **1000**. The three-dimensional structure **1000** can include a body **1002** that can be provided, for example, as a unitary portion of substantially flat material. The body **1002** can include a first surface **1004** and a second surface **1006** as discussed herein. In some embodiments, the body **1002** can be any machinable material and/or formable material. In some embodiments, the body **1002** can be a metal, a ceramic, an amorphous material such as glass or an amorphous metal, a polymer, or combinations thereof. In some embodiments, the body **1002** can be a metal, such as aluminum or an aluminum alloy. In some embodiments, the body **1002** can be a 6000 series aluminum alloy, for example a 6060, 6061, or 6063 aluminum alloy.

FIG. **19** shows a sectional view of a stage of a process for forming a three-dimensional structure **1000** from the body **1002**, for example as depicted in FIG. **18**. The first surface **1004** of the body **1002** can be subjected to a method of forming structure. In some embodiments, the method of forming structures can form one or more first cavities **1014**, for example a pattern of first cavities **1014**, extending into the body from the first surface **1004**. In some embodiments, and as illustrated in FIG. **19**, the first cavities **1014** can be formed by a forming or stamping process, whereby the body **1002** can be deformed and/or molded to create the first cavities **1014**. In some embodiments, the first cavities **1014** can be formed by other methods as discussed herein, for example by machining the first surface **1004**.

In some embodiments, the second surface **1006** can then be subjected to a method of forming structure as discussed herein. In some embodiments, the method of forming structures can form one or more second cavities **1016**, for example a pattern of second cavities **1016**, extending into the body from the second surface **1006**. The method used to form the second cavities **1016** can be a same or similar method to the method used to form the first cavities **1014**. In some embodiments, the method used to form the second cavities **1016** can be a different method than the method used to form the first cavities **1014**. For example, in some embodiments the first cavities **1014** can be formed by a stamping or forming process while the second cavities **1016** can be formed by a machining or etching process. The formed second cavities **1016** intersect with the first cavities **1014** to define a three-dimensional pattern of apertures **1008** in the body **1002** as discussed herein.

FIG. **16** shows a sectional view of a stage of a process for forming a three-dimensional structure **1002**. In some embodiments, portions of the body **1002** that may not include cavities **1014**, **1016** or a pattern of apertures can be formed into one or more structures or features by one or more methods. For example, peripheral portions of the body **1002** can be stamped or formed to create a flange **1020** extending away from the first surface **1004** of the body **1002**. In some embodiments, the flange **1020** and the first surface **1004** can define an internal volume. The one or more methods used to form structures or features, for example flange **1020**, can be carried out before, after, or during the methods used to form cavities **1014**, **1016** in the first and/or second surfaces **1004**, **1006**.

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FIG. **21** shows a sectional view of a three-dimensional structure **1002** formed according to a process. In some embodiments, the body **1002** can be subjected to one or more methods to form structures or features such as one or more mounting surfaces **1022** for components of an electronic device. The methods for forming such structures **1022** can include forging or pressing at least a portion of the body **1002**, although any method of forming the body as discussed herein can be used. In some embodiments, the structure or structures **1022** can include attachment features, threaded connectors, studs, posts, or the like, that are defined by the body **1002**. The final formed three-dimensional structure **1000** including the body **1002** can thereafter be used as, for example, a housing for an electronic device as discussed herein.

While the present disclosure generally describes the three-dimensional structure as including negative space of a spherical cavity extending into a body from a first surface of the body and intersecting or interfering with the negative space of one or more spherical cavities extending into the body from the second surface of the body, the cavities described with any of the embodiments detailed above can assume any geometric shape, pattern, size, or combination of shapes, patterns, and sizes. Additionally, in some examples, the smaller feature patterns of the three-dimensional structures can be selectively oriented and combined into a larger feature pattern that can be repeated throughout a body.

Various inventions have been described herein with reference to certain specific embodiments and examples. However, they will be recognized by those skilled in the art that many variations are possible without departing from the scope and spirit of the inventions disclosed herein, in that those inventions set forth in the claims below are intended to cover all variations and modifications of the inventions disclosed without departing from the spirit of the inventions. The terms "including:" and "having" come as used in the specification and claims shall have the same meaning as the term "comprising."

The foregoing description, for purposes of explanation, used specific nomenclature to provide a thorough understanding of the described embodiments. However, it will be apparent to one skilled in the art that the specific details are not required in order to practice the described embodiments. Thus, the foregoing descriptions of the specific embodiments described herein are presented for purposes of illustration and description. They are not meant to be exhaustive or to limit the embodiments to the precise forms disclosed. It will be apparent to one of ordinary skill in the art that many modifications and variations are possible in view of the above teachings.

What is claimed is:

1. An electronic device, comprising:

a body having a first surface and a second surface opposite the first surface;

the body defining a pattern of repeating base units extending between the first surface and the second surface, each base unit comprising;

a first spherical cavity on a first plane;

a second spherical cavity on the first plane and at least partially intersecting the first spherical cavity;

a third spherical cavity on the first plane and at least partially intersecting the first spherical cavity and the second spherical cavity;

a fourth spherical cavity on a second plane, the fourth spherical cavity intersecting the first spherical cavity, the second spherical cavity, and the third spherical